



PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U. S. Patent and Trademark Office: U. S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet	1	of	1	Attorney Docket Number	TRANS 3.0-037
-------	---	----	---	------------------------	---------------

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ³
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				

¹ Applicant's unique citation designation number (optional). ² See attached Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the application number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
B	A	T. Fjield, C.E. Silcox, and K. Hynnen, "Low Profile Lenses for Ultrasound Surgery," Department of Radiology, Brigham and Women's Hospital and Harvard Medical School, Boston, MA 02115	
	B	Todd Fjield, Christina Elise Silcox and Kullervo Hynnen, "Low-profile lenses for ultrasound surgery," IOP Publishing Ltd, Phys. Med. Biol., Vol. 44, No. 7, pp 1803-1813, (July 1999).	
	C	Shiu Chuen Chan, Mani Mina, Satish S. Udupa, Lalita Udupa, and William Lord, "Finite Element Analysis of Multilevel Acoustic Fresnel Lenses," IEEE Article, Transactions On Ultrasonics, Ferroelectrics, and Frequency Control, Vol. 43, No. 4, pp.670-677, (July 1996).	
	D	B. Hadimioglu, E.G. Rawson, R. Lujan, M. Lim, J.C. Zesch, B.T. Khuri-Yakub and C.F. Quate, "HIGH-EFFICIENCY FRESNEL ACOUSTIC LENSES," IEEE Article, Ultrasonics Symposium, Vol. 1, pp. 579-582, (1993).	
	E	Zhang Li and Zheng Changji, "CALCULATION OF SOUND INSERTION LOSS OF A BARRIER BY FRESNEL ZONE METHOD," Chinese Journal of Acoustics, Vol. 8, No. 3, pp. 227-234, (1988).	
	F	L.A.A. Warnes, "The use of antiphased zones in an acoustic Fresnel lens for a scanning sonar transmitter," Ultrasonics, pp. 184-188, (July 1982).	
	G	J. Bradford Merry, "HIGH PERFORMANCE ACOUSTO-OPTIC DEVICES: SOLUTIONS TO FRESNEL FIELD PROBLEMS," SPIE Article, Vol. 340, pp. 91-95, (January 1983).	
	H	Gao Jian-Bo, Zhang Fu-Cheng, Zhao Heng-Yuan, "FOCUSING PROPERTIES OF ACOUSTIC FRESNEL LENSES," ACTA ACUSTICA, Vol. 13, No. 5, (Sept. 1988).	

Examiner Signature	<i>MARIA J. BUDDE</i>	Date Considered	5-10-04
--------------------	-----------------------	-----------------	---------

*EXAMINER: Initials to indicate considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.



PTO/SB/08A (10-01)

Approved for use through 10/31/2002, OMB 0651-0031
U. S. Patent and Trademark Office: U. S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet	1	of	1	Attorney Docket Number	TRANS 3.0-037
-------	---	----	---	------------------------	---------------

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
AB	AA 5,961,465-		10-05-1999	Kelly, Jr. et al.	
	AB 5,938,608-		08-17-1999	Bieger et al.	
	AC 5,873,845-		02-23-1999	Cline et al.	
	AD 5,821,958-		10-13-1998	Lim	
	AE 5,817,036-		10-06-1998	Anthony et al.	
	AF 5,795,311-		08-18-1998	Wess	
	AG 5,402,792-		04-04-1995	Kimura	
	AH 4,936,303-		06-26-1990	Detwiler et al.	
	AI 4,219,846-		08-26-1980	Auphan	
	AJ 4,207,901-		06-17-1980	Nigam	

Class / Sub

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				

* Applicant's unique citation designation number (optional). ² See attached Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the application number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
AB	CA	Qian Zhang, Peter A. Lewin and Philip E. Bloomfield, "PVDF Transducers - A Performance Comparison of Single-Layer and Multilayer Structures," IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Vol. 44, No. 5, pp. 1148-1156, (Sept. 1997).	
	CB	Richard L. Goldberg and Stephen W. Smith, "Multilayer Piezoelectric Ceramics for Two-Dimensional Array Transducers," IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Vol. 41, No. 5, pp. 761-771, (Sept. 1994).	
	CC	Qian Zhang and Peter A. Lewin, "Wideband and Efficient Polymer Transducers Using Multiple Active Piezoelectric Films," IEEE Ultrasonics Symposium Proceedings, Vol. 2, pp. 757-760, (Oct. 31 - Nov. 3, 1993).	
	CD	Geoffrey R. Lockwood, Daniel H. Turnbull, and F. Stuart Foster, "Fabrication of High Frequency Spherically Shaped Ceramic Transducers," IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Vol. 41, No. 2, pp. 231-235, (March 1994).	
	CE	Qian Zhang, Peter A. Lewin and Philip E. Bloomfield, "Variable frequency multilayer PVDF transducer for ultrasound imaging," Proceedings of SPIE, Ultrasonic Transducer Engineering, Vol. 3037, pp. 2-12, (Feb. 27-28, 1997).	

Examiner Signature	MARK IN BOLD PRIMARY EXAMINER	Date Considered	5-10-04
--------------------	----------------------------------	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.